

REMARKS

In the Action, claims 34-58 are rejected. In view of the following comments, reconsideration and allowance are requested.

More specifically, claims 34-58 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2002/0025414 to Desai et al. The rejection is based on the position that each of the claimed features are disclosed in the cited publication. However, the Action fails to identify where each of the claimed features are disclosed or suggested in Desai et al either expressly or inherently.

The rejection is based on the filing date of the Desai et al. patent application and the filing date of the parent application, now U.S. Patent No. 6,316,075. The parent application appears to be based on a provisional application. However, the Action fails to establish that the published Desai et al. application is entitled to the filing date of the provisional application which forms the basis of this rejection. Thus, the Action fails to establish a date of publication prior to the effective filing date of the present application.

Anticipation requires that each and every element of the claim be disclosed expressly or inherently in the cited patent or publication. The Action has not identified where each feature of the claims is disclosed in Desai et al.

Desai et al. does not disclose or suggest the fiber reinforced flexible matrix as recited in claim 34. In particular, Desai et al. does not disclose a matrix comprising 10 to 75% by weight waste scrap carpeting where the waste scrap carpeting comprises 50 to 80% by weight of non-melting filler materials including inorganic fillers based on the weight of the backing of the carpeting. Desai et al. further fails to disclose a matrix comprising 25 to 90% by weight of a flexible second polymer as claimed. The passage referred to in the Action discloses generally the amounts of recycled material and virgin material. This passage does

not disclose or suggest the claimed specific amounts of waste scrap carpeting having a first polymer backing or the claimed amounts of a flexible second polymer.

Moreover, claim 34 specifically recites the matrix being a substantially continuous phase of the first and second polymers having carpet fibers and inorganic fillers dispersed therein. Desai et al. does not disclose or suggest a continuous phase of first and second polymers as claimed. Paragraph 0036 referred to in the Action discloses the recycled material being in a “powder form” having a particle size of 3,000 µm or less. Paragraph 0038 specifically discloses the backing or intermediate layer being formed by the powdered recycled material that is applied to a substrate in any manner in which powders can be applied to form a continuous layer. As specifically disclosed therein, the recycled powder is “fused to form a continuous layer”. The fusing is disclosed as not reducing the recycled material to a liquid state, but rather joining or binding the individual particles and granules of the recycled material by the application of heat and pressure. Thus, Desai et al. specifically discloses fused particles and clearly teaches away from forming a continuous phase of the polymers by avoiding complete melting of the polymers.

In contrast, claim 34 specifically recites the matrix being formed as a continuous phase of the first and second polymers having carpet fibers and inorganic fillers dispersed therein. In view of the disclosure of fused particles of Desai et al., Desai et al. does not anticipate claim 34.

Claims 35-46 are also not anticipated by Desai et al. for reciting additional features of the invention that are not disclosed or suggested in the cited reference. Desai et al. does not disclose the use of a polyvinyl chloride plasticizer as in claim 35, the matrix further comprising polyethylene copolymer as in claim 36, the matrix being formed as a homogeneous mixture of polyvinyl chloride and discrete carbon fibers having a length of 1/8

to 2 inches as in claim 37, the specific polymeric fibers of claim 38, either alone or in combination with the features of claim 34.

Desai et al. also fails to disclose a matrix comprising 45 to 85% by weight polyvinyl chloride as in claim 39, the second polymer being a flexible polyvinyl chloride having a shore hardness of about 40 to about 100 as in claim 40, the carpet scrap of claim 41 or the plasticizer of claim 42 in combination with the features of claim 34.

Desai et al. also does not disclose or suggest a matrix comprising 5 to 20% by weight carpet fibers as in claim 43, 10 to 55% by weight polyvinyl chloride from the carpet as in claim 44, the matrix comprising 15% by weight fiber, 45% by weight polyvinyl chloride backing and 40% by weight inert materials as in claim 45, or the first polymer being polyvinyl chloride as in claim 46 in combination with the features of claim 34.

Independent claim 47 is also not anticipated by Desai et al. for the reasons advance with respect to claim 34. Specifically, Desai et al. does not disclose or suggest a matrix comprising a substantially continuous phase of polyvinyl chloride and the first polymer from the carpet backing where the matrix includes carpet fibers, inorganic fillers and latex materials dispersed therein. As noted above, Desai et al. only discloses powdered particles of recycled material that are compressed and fused to form the layer without melting the polymer components.

Desai et al. further fails to disclose the matrix comprising 5 to 20% by weight carpet fibers, 10 to 40% by weight filler materials, and the remainder polyvinyl chloride as in claim 48, either alone or in combination with the features of claim 47. Accordingly, claims 47 and 48 are not anticipated.

Claims 49-58 are directed to a process of forming a fiber reinforced flexible molded article by supplying a feed mixture to the inlet of an extruder where the feed mixture comprises flexible polyvinyl chloride and 10 to 75% by weight carpet scrap where the carpet

scrap has a fiber component and a backing material which includes 30 to 50% by weight of a first polymer component. Claim 49 further recites the step of heating the feed mixture in the extruder to a temperature sufficient to melt the first polymer and the flexible polyvinyl chloride without melting the fiber component and reducing the fiber length to form a uniform and continuous mixture. The mixture is discharged from the extruder and shaped to form a molded flexible article of a matrix of a substantially continuous phase of the first polymer and the polyvinyl chloride.

As noted above, Desai et al. discloses compacting or compressing the recycled powder material to fuse the particles together without melting. There is no suggestion in Desai et al. of feeding the claimed feed mixture to an extruder and melting the polymer components to form the continuous uniform mixture. There is clearly no suggestion in Desai et al. of an extruded mixture that is molded to form a flexible article of a matrix of a substantially continuous phase of a first polymer component and polyvinyl chloride. Accordingly, claim 49 is not anticipated by Desai et al.

Claims 50-58 are also allowable as depending from an allowable base claim and for reciting additional features of the invention that are not disclosed or suggested in Desai et al. For example, Desai et al. does not disclose the flexible article comprising 5 to 20% by weight of a fiber component and 45 to 85% by weight of the first polymer component and polyvinyl chloride as in claim 50, the flexible article comprising 10 to 55% by weight polyvinyl chloride supplied from the carpet scrap as in claim 51, the uniform mixture having a melt flow index of less than about 5 as in claim 52, the specific fiber components of claim 53, or the step of comminuting the carpet scrap prior to feeding to an extruder as in claim 54, either alone or in combination with the process of claim 49.

Desai et al. also fails to disclose the step of heating a feed mixture to about 140 to 190°C to melt the polyvinyl chloride without melting the fiber component as in claim 55, the

flexible polyvinyl chloride having a shore hardness of about 40 to about 100 as in claim 56, the matrix comprising 10 to 40% by weight unmelted filler materials from the carpet as in claim 57, or the carpet scrap containing 50 to 80% by weight inorganic fillers and latex materials which are dispersed in the continuous phase of the extruded matrix as in claim 58, in combination with the process steps of claim 49.

In view of the above comments and the deficiencies of the cited patent, the claims are submitted to be allowable over the art of record. Thus, reconsideration and allowance are requested.

Respectfully submitted,



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